

First impressions

THE SCIENCE OF SOCIAL INTERACTION

DR ROB JENKINS
AND PROFESSOR
SIMON GARROD,
ESRC/MRC project *Social
Interaction: A Cognitive-
Neurosciences Approach*

HUMAN BEINGS ARE social animals, and in many ways our society is increasingly interconnected. With population on the rise and communication technologies booming, an average person's average day can include hundreds of social encounters, from fleeting glances to hour-long phone calls. This degree of interconnectedness can be tremendously enriching, but there is a downside. Every opportunity for communication carries a risk of miscommunication, which turns out to be surprisingly important. Subtle signals from the face or voice have the power to shape economies and influence electoral outcomes.

Take facial appearance. Experiments show that within a tenth of a second of seeing a face, we have already made up our minds about its owner. Extra time can shore up our initial impressions, but tends not to change them. And these snap judgements have all sorts of unforeseen consequences in the real world. Inferences of competence based solely on facial appearance have been shown to predict the outcomes of US congressional elections. Dominance ratings of chief executives' faces can predict their companies' profits.

The implication is that supposedly responsible decision-making can be hijacked by people's looks. Add voice and gesture to the mix, and what emerges is a

Our impressions of other people originate in primitive emotion centres deep within the brain, in evolutionarily old circuits that regulate fear and reward

rich and seemingly irresistible body language that can influence our behaviour without our knowing it. First impressions last a long time indeed – a sobering thought to take with you into a job interview, not to mention a court appearance.

Impressions are mainly formed unconsciously. To identify the steps involved, we must turn to the ultimate engine of social interaction, the brain itself. Our smooth running requires us to grasp complex situations in the blink of an eye. Is this person hostile? Does she know that he is lying? When should I interrupt? How the brain resolves such dilemmas is not yet fully understood. But recent advances in neuro-imaging offer a direct window onto brain activity.

The view is fascinating, and full of surprises. For example, our impressions of other people originate in primitive emotion centres deep inside the brain, in evolutionarily old circuits that regulate fear and reward. These circuits are highly sensitive to facial expressions of emotion. The merest hint of a smile or frown is enough to set them off. The upshot is that even a neutral expression

can activate these circuits, if the underlying features suggest a certain disposition. So if your mouth turns up at the corners, people may tend to regard you as trustworthy. If your brow is naturally furrowed, however, you may arouse suspicion.

We might think of emotions as strictly private, but emotional responses to emotional expressions give brains a powerful coupling mechanism. This means that mood can be highly contagious. Try listening to the clip at <http://www.bbc.co.uk/fivelive/fungames/audio/legover.mp3> without smiling. You're doomed to failure, but it will make your day.

Behaviours can also be contagious. Perhaps the most familiar example is contagious yawning, where one drowsy indiscretion can set the whole room off. This phenomenon is often regarded as a one-off, but in fact social interaction is shot through with mimicry. Conversational partners follow each other's gaze, and unwittingly align their accents and mannerisms. Over decades of companionship, spouses converge visibly in their physical appearance.

On shorter time scales, unconscious mimicry has implications for co-ordinating joint actions. Co-ordinated movement often requires millimetre precision and split-second timing, but it also demands responsiveness to other people, their actions, and their goals. Somehow, this complex behaviour comes as second nature to us. But group cohesion can be fragile. Co-ordination can spell the difference between a Mexican wave and a crowd panic.

So who stands to benefit from social interaction research? Broadly speaking, people who communicate. In our personal and professional lives alike, good decisions depend on effective communication. But what people say is not always what they think. It is often body language that carries the important message. Some people have difficulty reading body language, and this can hold them back in social settings. This pattern is typical of autism. One long-term goal of our research is to help decode body language and identify the building blocks of social fluency for use in practical training.

There are also clear technological applications. Mobile phone and computer industries have a particular interest in tapping supplementary channels of communication to support speech and text. Current communications technology leaves many users feeling cold, but building social signals into machines could help to restore the human touch.

Despite these potential beneficiaries, it is arguably the economy that has most to gain. 2008 saw unprecedented turmoil in global markets. Banks failed, markets collapsed, and governments scrambled to avert meltdown. And significantly, world leaders were united in their prescription for recovery: trust, confidence, and co-ordinated action. ■

<http://www.socialinteraction.gla.ac.uk>